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ORNITHOLOGICAL REPORT FOR NORFOLK (1909).

By J. H. Gurney, F.Z.S.
(Assisted by other Norfolk Naturalists.)

(Plate I.)

The year 1909 had not any great surprises in store for the ornithological enthusiast, but Norfolk obtained visits from a few rare migrants, and our county, together with Suffolk, had its share in the great irruption of Crossbills.

The passage of Crows, Rooks, and Woodcocks in March, when the direction of their flight was northward and eastward, was marked, but the autumn migration presented no features calling for remark. Statistics and observations on the emigration of birds in spring are more needed than notes about their immigration in the autumn, for we have plenty of the latter so far as Norfolk and Suffolk are concerned, but exceedingly few of the former.

The principal rarities to be registered have been the flock of Black Brents in January, the Black-breasted Dipper in February, the Avocets and Alpine Swift in July, the Ortolan Buntings in September, and the Glossy Ibises in August and December. A Stork was doubtfully reported in the Wash, but that and the Flamingo and the Snow-Geese at Holkham may have been purposely turned-out birds.

1909 will be known as the "Crossbill year," for the irruption of these strange gipsy rovers, if not the largest as yet known, has at any rate been better recorded, with dates more fully registered, both in British and in foreign journals, than any which preceded it. The first-comers were for the most part noted in places along the coast, and a few met their fate on ships. But it was amongst the great belts of Scotch fir and larch-wood in the south-west of Norfolk and the part of Suffolk adjoining that the later flocks were found. Here they became almost plentiful—particularly in the neighbourhood of Brandon, Thetford, Swaffham, and Didlington—and their ranks evidently continued to receive accessions up to Christmas, if not later. Indeed, the great feature of the 1909 movement has been the length of time it went on, in which it differed essentially from the great migrations of other species of birds; yet I imagine that these latest comers had worked their way to Norfolk by stages from other parts of England. The Crossbill has been a well-known Norfolk bird since the middle of the seventeenth century, but in looking through the late Henry Stevenson's notes I can find no record of any irruption like the present one. The last occasion when there was any number of these wanderers was in 1898, but the numbers then fell far below what 1909 has brought us.

The Luminous Owl.—Referring to the luminous Barn-Owl, which gave rise to so much controversy, it may be mentioned that it is still alive, or at any rate was so in February, and on the same property where it was before, but is no longer so bright as it was. Luminous Barn-Owls, I learn from Mr. L. Ternier, have recently (December, 1909) made an appearance in Spain, where two were seen.

I believe I said before that the figures which are employed in these Notes for denoting the force of the wind, are the same as used at the Meteorological Office. Force 2 is a gentle wind, force 4 a stiff breeze, force 6 a gale; but it has to be recollected that readings on the sea-coast give a higher strength than the same made inland. That anyone who wishes to study migration on the East Coast must take the wind into account I feel more and more convinced. It is a factor which has not been sufficiently considered hitherto by those who note the direction in which flights of birds are going. The rainfall for 1909 was 26·95 in.

I have to acknowledge the assistance of the Rev. M. C. Bird and Mr. E. C. Arnold in drawing up the following Notes.

BRITISH MUSEUM

JANUARY.

The year opened with a mild day; the snow all gone. Beyond the presence of a few Goosanders, a brace of Whooper Swans seen by Mr. L. C. Farmer, and a Goldeneye at Hoveton, there is not much in my note-book to record. On the 21st the frost set in again, and on the 25th, with eleven degrees, a frozen-out Swan† was seen to fly over Keswick, probably only a Mute Swan.

9th.—Mr. Bird notes twelve Long-eared Owls seen, a Greater Spotted Woodpecker, and a "trip" of Goldfinches, and two days afterwards five Goldeneye Ducks in their handsome adult plumage, which is only to be met with after Christmas.

19th.—During this month and the last days of December, 1908, Mr. F. Coburn, of Birmingham, obtained no fewer than fourteen examples of the Pacific, or Black, Brent Goose (*Bernicla nigricans* (Laur.))—of which a figure is given in 'The Zoologist' for 1908 (Plate I.)—from King's Lynn, all of which had been shot in the Wash, and were possibly members of one and the same flock. Two of them were killed on Jan. 19th, and seven more on the 26th. This is a valuable series, as Mr. Coburn has now all grades from the first plumage without any white on the neck up to adults of both sexes. He now considers that at all ages and seasons, and in both sexes, the black or slaty-black under parts are constant, and that after the first plumage there is always a larger amount of white on the neck. He finds females to be of a paler slaty black than males.

29th.—An adult Iceland Gull, shot on the Thurne, near Yarmouth, as I learn from Mr. E. C. Saunders, who also informs me that a younger one was killed near there on the 20th, but I have not seen these.

FEBRUARY.

1st.—The Pied Wagtail returned to Keswick with its accustomed regularity, and, as signs of spring, on the 4th the Sky-Lark and Robin were in song at Brunstead.

10th.—A Black-breasted Dipper shot at Coltishall, where it had been about for several days (S. H. Long). Mr. Barclay informs me that his keeper's dog put up a Bittern when searching a reed-bed at Hoveton for a wounded Duck. Of course it was not shot; indeed, there is now a general desire among Broad-owners to protect Bitterns.

MARCH.

7th.—Mr. G. Jary reports nearly two hundred Wigeon on Breydon Broad; migrants no doubt, probably travelling north.

11th.—N.E., 3. Rooks and Grey Crows migrating to the north, *i. e.* against the wind, at Catfield (M. C. Bird).

18th.—S., 3. From 7.30 a.m. to 11 o'clock Grey Crows were passing Northrepps, which is one mile from the sea, flying towards the south-east and against the wind. This movement seaward takes place every year as regularly as March comes round. The same observer saw them again on the 23rd and 25th, and on April 1st, mingled as usual with Rooks and Jackdaws. We know far less about the spring migration than we do about the autumn immigration of birds, but about the *Corvidæ* we do know something at this period.

19th.—S.S.E., 3. Sky three parts clouded, passing showers.

20th.—S.S.W., overcast and misty. A great number of Sky-Larks and Starlings at Cromer Lighthouse, attracted in the usual way by the light shining through the fog, in the rays of which they fluttered around. Mr. Pender, the principal, tells me that one hundred and forty-four Larks and four hundred Starlings were taken at the lantern by his men, and that the four stays of the flagstaff, which stands some twenty feet away from the lighthouse, were simply packed with birds. So many of them were there that the Starlings were sitting one upon another on the stays, while a bunch on the top of the flagstaff gave it the appearance of being surmounted by a large bowl. There were also Plovers and Curlews flying round, but none of these came in contact with the glass. A heap of the slain are shown in the photograph (Plate I.). I believe the men make them into pies.

21st.—W., overcast. Last night, as well as the night before, Happisburgh Lighthouse, which is eleven miles from Cromer, presented a similar spectacle, namely, a congregation of birds which had lost their way in the fog. I learn from Mr. Gentry, who is in charge, that the gallery around the lantern, as well as the rails, was packed with Starlings, but no mention is made of Larks. Lapwings and Curlews were also seen. All these birds were probably on their way out to sea, and about to leave this country for the summer.

27th.—W.N.W., 2. Nearly thirty Woodcocks flushed by the gamekeeper at Northrepps, the most he ever remembers putting up in a day; they probably came with the high north-west wind (force 5) yesterday, and were waiting for a change before passing the North Sea. They were not molested, and after this year Woodcocks will be protected in Norfolk from Feb. 1st.

31st.—About this date a drake hybrid between the Nyroca Duck and the Pochard†—a cross to which Bartlett gave the name of *Fuligula ferinoides*—was received by the Hon. E. S. Montagu from near Potter Heigham.

April.

18th.—S.W., 2. My only entry for April is that the first Spoonbills, three in number—spring migrants, true to their usual time of coming—were seen on the mud-flats of Breydon Broad, where Mr. Jary had them in view off and on until the 29th, and carefully protected them from all roving gunners. On one occasion they even had the temerity to alight on the Marine Parade (A. Patterson), but no one violated their security. At the same time one was seen at Cley by Mr. Pinchin.

May.

1st.—N.N.E., varying to N.W. Two more Spoonbills seen by Jary, probably not the same as those which left Breydon on the 29th.

6th.—A north-easterly gale, force 6. Mr. Jary writes:—"This morning I counted one hundred and ninety-six Bar-tailed Godwits and Grey Plover in one flock on the mud-flats; wind east, from which quarter it has been blowing for several days, and very strong." What effect the gale had at Cley and Blakeney I was not informed, but inland Ruffs and Reeves felt it, for Mr. Bird tells me that there were quite one hundred on one of the Broads the following day, as well as a Greenshank, an Oystercatcher, and some Cormorants. It is only to be expected that birds should be brought up in their course and detained by a gale, which stops all their intended nocturnal progress overhead, and consequently they descend to the muds and marshes, and have to wait until it abates. The wind was still very high on the 7th (E., 5) and 8th, and from the east. On the 8th the Breydon watcher writes again:—"A great many birds here now, more Bar-tailed Godwits than I ever saw before, some Greenshanks, seven Sheld-Ducks, scores of Whimbrel and Knot, and plenty of Dunlin and Ringed Plover." These Godwits were presumably the return passage of the unusual numbers registered as passing during the previous autumn (*cf.* Zool. 1909, pp. 123, 128).

17th.—A Long-eared Owl squatting on the ground at Colney was found to be covering a young one,† which had had the ill-luck to fall out of its nest in a spruce-fir hard by. On examination the nest was found to contain another nestling, which was dead, but the one on the ground had been well cared for and was nourished, a dead Thrush lying beside it for the next meal.

31st.—*Cuckoo Notes.*—About a quarter to eleven this morning a Cuckoo was calling loudly on a tall beech-tree by my front door, with that peculiar bubbling intonation which is the characteristic of a female. About forty yards away there stands an ivy-clad garden-wall, and at 4 p.m. the coachman, whose window overlooks it, saw a Cuckoo—no doubt the same one I had heard—searching this wall. Several times she was seen to hang on to the ivy, evidently peering into its interstices in different places, and twice the coachman saw her alight on the ground, as if giving up her search for the present. Meanwhile the Pied-Wagtails, whose nest containing one egg was deftly hidden in a recess in the ivy at the top of the wall, were looking on, but whether with indignation or with simple curiosity it is hard to say; neither do we know whether the Cuckoo discovered their nest, which was unusually well hidden.

June 1st.—The coachman, who at my request instituted a watch, began taking observations from his window at 6 a.m., but the Cuckoo was not seen to come to the ivy. There were two Wagtail's eggs in the nest when we looked into it at 9 a.m.

2nd.—Three Wagtail's eggs now in the nest.

3rd.—At 7 a.m. the coachman heard the Wagtails calling, and at 9 a.m. the nest contained the expected Cuckoo's egg, as well as the three Wagtail's eggs already mentioned, all four bearing a close colour resemblance to one another. The Cuckoo's egg had probably been deposited in the nest between 6.30 a.m. and 7 a.m., and it was that which excited the Wagtails.

4th.—There are now four Wagtail's eggs.

5th.—There are five Wagtail's eggs.

6th.—Female Cuckoo heard about fifty yards from the nest at 10.30 a.m.

7th.—Female Cuckoo heard at 4.30 p.m.

8th.—Nothing to record.

9th.—Early this morning we found that two of the Wagtail's eggs had been removed from the nest; they were gone at 8.45 a.m., there being then left in the nest three Wagtail's eggs and the Cuckoo's egg. Nothing was seen or heard of the female Cuckoo, but the coachman, once at least, detected the cry of the male "cuckooing" on the beech-tree near; whether he was the robber or whether the female Cuckoo took the eggs it is impossible to say. At any rate, one of the eggs was not carried far away, for I found half its shell, yolkless and neatly divided, suspended in the ivy some two feet below the Wagtail's nest.

10th.—At 12.45 a.m. the female Cuckoo was calling about a hundred yards from the nest.

11th.—The Cuckoo not heard.

12th.—The Cuckoo was on the beech-tree once at least.

13th, 14th, 15th.—The Cuckoo not heard, and on the 15th I had to leave home.

16th.—Mr. Gerard Gurney found one of the Wagtail's eggs hatched, but the other eggs not sprung; it had been hatched between 7.30 a.m. and 5.30 p.m. A Cuckoo flew over the wall in the morning.

17th.—At 6.30 a.m. the coachman found that the Cuckoo's egg was hatched, and that a second Wagtail's egg had been hatched also. As this Cuckoo's egg was laid on June 3rd its incubation is proved to have been fourteen days. At 6.30 p.m. the third Wagtail's egg was also hatched.

18th.—Looking at 6.30 a.m. the coachman found that one of the nestling Wagtails had been cast out of the nest, the age of the young Cuckoo—which may or may not have done the work of ejectment—being then twenty-four hours. At 9.30 a.m. a second Wagtail was lying outside; both were dead, but it is certain they had not been dead long, for their bodies were not yet cold. At 11 o'clock the third Wagtail had been cast out, and was lying about an inch from the nest, and still alive. That the young Cuckoo had thrown this one out is almost certain, though no one saw it done. At 11.30 a.m. Mr. Gerard Gurney put back the nestling Wagtail, which was still alive, into the nest, and reported events as follows:—After ten minutes the young Cuckoo began to get restless and to fidget, and soon tried to expel the little Wagtail, working round and round the inside of the nest by an active use of both legs and wings, but all its efforts were unavailing, and it did not get the Wagtail out. The young Cuckoo took repeated rests, even for as much as ten minutes at a time, lying quite still with the Wagtail resting on its back, but if the latter slipped a little the Cuckoo would move. The young Wagtail had not been ejected up to 3 p.m., but at 4.30 p.m. it was again outside the nest, lying exactly where my son had found it in the morning. I am inclined to attribute its expulsion to the parent Wagtails, as the young Cuckoo was exhausted.

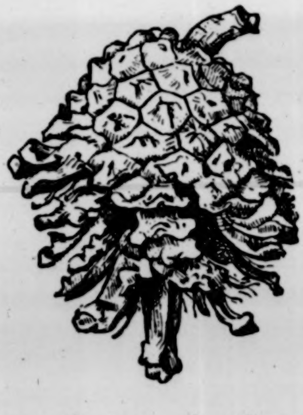
JUNE.

1st.—Under this date Mr. Bird sends me a curious instance of a Brown Owl and a Kestrel having laid their eggs in opposite sides of an old Pigeon-locker, which had been erected on a tree in a Horsey osier-ground.

3rd.—A nestling Hawfinch† picked up at Keswick, but, although it seemed impossible that it could have flown many yards, search failed to discover the nest.

18th.—Mr. Cresswell informs me of a Flamingo being seen at Wolterton Creek, in the Wash, possibly one from the Zoological Gardens, the escape of which was announced in April (R. Pocock). A London newspaper also published the shooting of one on Mersea Island, Essex, in September, and Mr. Louis Ternier saw one on Nov. 30th in the bay of the Seine, which is opposite the Isle of Wight. It is difficult to say where they may have all come from; the Duchess of Bedford has not lost any lately, but other people may have done so. Mr. Ternier heard of another killed in Vendée about November ('Revue Fr. d'Ornithologie,' 1910, p. 153). Mr. W. A. Harding, who keeps Flamingos, lost two in 1906 and one in 1907, but none in 1909. There seems no reason why it should not visit us sometimes as a migrant, being not uncommon in the South of France, where I have seen it.

21st.—*Migration of Crossbills.*—The first intimation of the great Crossbill immigration having reached Norfolk came from Mr. E. C. Saunders, who had one which had struck the telegraph-wires near Yarmouth on June 21st. No more were reported during that month, but on July 8th the gardener at Northrepps counted twelve on a spruce-fir. The following day a male occurred at Stalham (Bird), and on the 10th the flock at Northrepps had increased from twelve to sixteen. Although constantly looking out for them, it was not until Sept. 22nd that I obtained my first view of three feeding on a young larch-tree at Northrepps. These soon disappeared, but on Oct. 26th the same small plantation was visited by a much larger flock, my gardener, whose attention was first attracted to them by their notes, counting twenty-five. During November and December a good many were seen in South-west Norfolk, where there is a good deal of uncultivated country, and plenty of fir-trees. Near Thetford they appear to have been almost common (W. G. Clarke), while there were many in the neighbourhood of Swaffham (E. T. Danberry), and at Didlington (Upcher), and some at Castle Rising (Tracey). I watched a pair on Jan. 2nd at Thetford. It is always an engaging sight to watch their parrot-like ways. One of them detached a good-sized cone from a young Scotch-fir, and flew with it in its beak from the fir-tree on which it had been perched for several yards, but, again alighting, began slowly pecking the cone to pieces, holding it the while with one or both feet, while its strong mandibles brought point to point (though this I was not near enough to distinguish) prised off the scales. Its actions in dealing with a cone display great muscular strength, and there is hardly any attitude which Crossbills are incapable of assuming. After some minutes the cone was dropped, and I picked up what I believe to have been the same one, of which Mr. Wilson has made a drawing. On examination it does not seem very dissimilar from a cone dealt with by a Greater Spotted Woodpecker, which was drawn in a former



paper (Zool. 1902, p. 95), and that also was off a Scotch-fir. On Jan. 31st they were again seen at Northrepps—a little flock of five—but in a different wood from the others, and they were soon on the wing. No more were detected in that parish until March 2nd, when eight were seen by Burdett. Remarkable as the great irruption has been, the most interesting fact connected with it has been the breeding of four pairs at Thetford,* and of seven pairs at Aldeburgh, on the coast of Suffolk ('The Field,' March 5th, 1910), and that they also bred in other parts of Norfolk is highly probable.

29th.—N.E., 2. Another Spoonbill on Breydon Broad, where it remained until July 8th, and was again seen by the watcher on the 22nd, 29th, and on Aug. 3rd and 8th.

July.

15th.—It is seldom a year passes without a visit from an Avocet to Breydon tidal Broad, and accordingly one was seen to-day (G. Jary). The watcher saw it again on the 18th and on the 29th, and on Aug. 3rd, but on the 4th it had gone. On the 8th, however, it returned with two more, but he states that they only stayed about two hours, for, it happening to be a very high tide, there were soon no muds left for them to stand upon. Perhaps it was the tide which had already flooded them off their feeding-grounds in Holland. The watcher saw them flying away to the eastward; wind east, fog coming on.

25th.—Between the 25th and the 31st an Alpine Swift was identified by Mr. Mussel-White on several occasions; it was flying up and down the Cromer cliffs, just the same place where one was seen in September, 1890. This species usually follows coast-lines, which is perhaps the reason why it has only been once obtained in Heligoland.

August.

3rd.—Mr. Bird put a young Marsh-Harrier up from the sedge adjoining one of the Broads, which he had every reason for believing was a locally bred one. A pair of Montagu's Harriers probably nested at Hockwold Fen, where Mr. Upcher tells me they were seen about during the summer, and two pairs had eggs in East Norfolk, but no young. However, they maintain their hold pretty well, and I was credibly informed of eight being seen on one day in May, of which six were grey males. In the Broad district, where they have undergone the chief persecution, I am glad to learn from Mr. Montagu that a scheme is on foot for their protection, and none too soon.

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* 'British Birds,' iii. pp. 302, 371.

13th.—Under this date one of our coast watchers, where there is a Tern settlement, writes to my nephew, who is secretary of the fund, giving a good account of the birds under his charge. There are, he writes, still several Tern's eggs left unhatched, and not rotten ones either, as in some of them the young ones can be heard inside; also there are several young of the Common Tern about on the shore, which are still incapable of flight, as well as young ones which can fly, besides a fine show of adults of both this species and the Lesser Tern. A satisfactory report showing what protection can do.

19th.—A young female Golden Oriole,† a species which very seldom comes to Norfolk now, shot at Cley, but not anywhere near the sea. The explanation of the growing scarcity of this beautiful migrant seems to be that those Orioles which used to come to East Anglia were birds which had wintered in Spain, Sicily, and Italy. Now these have all been shot, and those which winter further south—that is, in Africa—do not travel as far as England, their proper limit being the North of France. The same reason explains the disappearance of the Hobby, which is hardly ever seen in Norfolk now, and accounts as well for the scarcity of the Hoopoe.

20th.—The irruption of Greater Spotted Woodpeckers reported at Rossitton, in the Baltic (*cf.* 'The Field' of Sept. 11th), led naturalists to expect them in England, but the number in Norfolk has not been much in excess of their usual strength. The first date to hand is "Northrepps, August 20th," and another the next day, and another at Hanworth. Mr. Pashley had one† brought him which had been shot close to the sea by a man who was digging for worms on the muds, and I watched another† which seemed to have just arrived. It is curious that among so many migrations of this species we should never have met with an instance of the Green Woodpecker crossing the sea, nor has it been obtained in Heligoland.

28th.—No wind. Two Glossy Ibises seen by the watcher on Breydon Broad had gone the next day.

SEPTEMBER.

11th.—*Perplexing Autumnal Movements.*— Among the rush of small migrants last year the Ortolan Bunting was not included, nor do I remember having heard of any since September, 1904, in Norfolk or Suffolk, but this has been made up for by the presence of a small flock on our coast during the present month of 1909. The first one was identified by Mr. F. Richards on Sept. 11th, and others were seen at intervals up to the 23rd; certainly eight or nine altogether were identified, and some shot. Mr. E. C. Arnold also thinks he saw a Little Bunting. Neither species is rare in Heligoland, the Ortolan being in fact, according to Gätke, quite a common bird on that wonderful island. The north and south direction of the annual lines of migrating Buntings and other small birds on the east coast of England, which are alternately vernal and autumnal, are comprehensible enough, but there are certain other movements of birds in Norfolk during September and October of which the same cannot be said, for they are not to be so easily understood. What I refer to are coast movements, chiefly performed by small birds, and which can only be held to be movements ruled by the wind. These travelling bands of small birds—too much scattered to be called flocks—are especially to be noticed on that part of the coast of this county which lies between Wells and Hunstanton. No doubt it is easier for Sky-Larks, Wheatears, Finches, Yellowhammers, and perhaps an Ortolan, &c., to fly slowly and by short stages against a moderate wind than to remain stationary where they are, and especially must it be easier for Martins and Swallows, which perch but little. But these birds cannot be called migrants in the usually understood sense of the word, because more often than not they are going the wrong way—that is to say, north—at a time of the year (September) when they should be going south.

17th.—N.E., 1; fog in the morning. Mr. E. C. Arnold saw several Sparrow-Hawks and Kestrels near the sea, which had just come in, perhaps delayed by the fog. On the 20th I saw four Sparrow-Hawks† in different places, and about the same time Mr. Lowne had a Sparrow-Hawk and a Kestrel which had been caught on ships. There are always arrivals of these two species in September.

20th.—A Tawny Owl† found drowned in the stable-tank at Northrepps. The reflection of the water may have caused the accident, but I think it more likely that, having just arrived, it went into the first dark corner it saw, with the intention of roosting.

27th.—Two Lesser Spotted Woodpeckers seen at Sustead by Mr. Davy, and one on the 25th at Aldborough. Mr. Dye received a Water-Rail killed by the telegraph-wires in the middle of Yarmouth.

30th.—Saw the first Grey Crow.†

OCTOBER.

1st.—A Hoopoe seen at Drayton (Berners).

2nd.—A young Scaup-Duck,† which fell winged to my shot into a large pond, showed great powers of diving, and it was not until the following day that the keeper retrieved it.

10th.—S.E., 2, with a strong upper current blowing from the west. Flocks of Sky-Larks† coming in from the sea at Overstrand, up to as late as 5 p.m., flying from the north, and they were also noted by Mr. Dye at Yarmouth. It would have been a good day for birds at the light-vessels.

11th.—High wind from S.W. A Swift seen at Sherringham by Sir Digby Pigott, and on the 13th the same, or another, was picked up in Cromer churchyard by Mr. Barclay. Last year the Swift was late in leaving (*cf.* Zool. p. 132), but these laggards are not Norfolk birds, but travellers which have come from some place further north. In 1872 I saw a Swift on Oct. 3rd, and in 1874 one on Oct. 14th—both near Cromer.

12th.—A Skua, probably Richardson's Skua, was seen by Mr. Bird at Wells, mobbing a Heron, which it made to drop its prey, but the Skua did not attempt to secure it.

15th.—A Fork-tailed Petrel picked up at Yarmouth (Saunders).

Snow Geese.†—Towards the end of October, when the Pink-footed Geese were arriving, according to custom, on the grass-lands which form their favourite feeding-grounds at Holkam and Burnham, it was seen that there were two white ones among them, and subsequently a third stranger of a dusky lemon tint was detected by Mr. A. Napier, who at once rightly concluded that the white birds were Snow Geese. They were not very shy, and on several occasions Mr. Napier managed to crawl within a hundred yards, so as to plainly see the black primaries every time they unfolded or raised a wing. I was not so fortunate as he had been, but thanks to his piloting on Dec. 1st we got on that day within a quarter of a mile of the two white ones, and when they rose with the whole flock of some five hundred Pink-footed Geese from the grass on which they had been scattered it was a sight to be remembered. At the beginning of January the Snow Geese were joined by two more anomalous strangers, described as being of a lemon tint in plumage, but up to the time of going to press their identity had not been established. The question is whether these Geese, as well as four Snow Geese, recorded as being recently seen in Ireland (Zool. 1909, p. 77), are wild ones, or whether they have not, as seems probable, flown from Woburn, where the Duchess of Bedford bred a good many, and allowed the young ones to fly unpinioned.

NOVEMBER.

5th.—W.S.W., 2. To-day Rooks, Grey Crows, Jackdaws, Starlings, a flock of one hundred and fifty Wood-Pigeons, Fieldfares, Redwings, and Lapwings—one flock of two hundred—were seen arriving from over the sea by the gardener at Northrepps, in an almost continuous stream from 6.50 a.m., when he went out, to 8.15 a.m., after which the stream slackened, and there were only stragglers. Probably the flight had been going on long before he got up, for the birds which we see by day may not be a thousandth part of what arrive before it is light, when we have little or no cognizance of their flights overhead. It was rather remarkable that three days afterwards, the weather being very fine, Rooks were to be seen near Norwich, with settled purpose going north, but it was against the wind, as was the direction of those arriving in England on the 5th.

[18th.—Lanceolated Warbler shot in Lincolnshire.]

DECEMBER.

1st.—W.S.W., 3. A very late Wheatear seen at Eccles-on-the-Sea by Mr. Bird.* I have not before this had a later date for the Wheatear than Nov. 2nd.

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* Another on Jan. 3rd, 1910, at Twyford (C. Hamond).

2nd.—W.N.W., 3. A Glossy Ibis—probably the last survivor of a flock whose deaths were recorded in Yorkshire, Ireland, and elsewhere—shot between the River Bure and Breydon by a cowkeeper (B. Dye). Also Mr. Saunders informs me he had a Little Stint from Breydon, a very late date for it.

31st.—A Bittern heard "booming" by Mr. Bird.

VARIETIES OF PLUMAGE.

On Jan. 8th a cream-coloured Starling was seen by Miss Buxton near Aylsham. On April 21st a brown Partridge of the *Perdix montana* type was watched for some time in a field at Sculthorpe by Mr. Hamond, which did not appear to have a mate; it was near a pair of the ordinary colour. Another was seen at Baudeswell on Dec. 31st (Walter). It has been lately ascertained that this erythrism also occurs in the Grouse ('British Birds,' iii. p. 342). On May 16th a pure white young Hedge Accentor,† which could not have very long left its nest, was caught by a prowling cat at Sprowston. On Sept. 6th Mr. T. E. Gunn received from Diss a white Pied-Wagtail,† immature, just showing a tinge of yellow on the cheeks and crown. At the same time a similar one, probably from the same nest, appeared at Sherringham, where it remained until the 14th, or later. I just missed seeing it by a few hours. On the 13th a pale variety of the male Wheatear† was shot near the sea by Mr. Richards. Almost the only colour which this bird exhibited was a tint of slate-colour on the back and head, which gave a cast of blue to its appearance when fresh. It was mounted by Mr. Pashley, who also had a handsome pied one,† and a pied Brambling,† but the latter was a cage-bird. On Dec. 31st a black-and-white Coot was among the slain at a Coot-battue held on our largest Broad, as I understand from Mr. Nudd, who states that the bag totalled six hundred, and four Pochards.

WOOD-PIGEON DIPHTHERIA.

It does not seem that the disease in Wood-Pigeons resembling diphtheria has by any means died out in Norfolk, for several correspondents mention meeting with victims to it during the winter months, but I did not hear of any being picked up in the summer. One was picked up which had died in the act of drinking; another was seen by Mr. R. Gurney to quit a tree, and, after circling round once or twice, to fall dead in its flight; others were caught by the hand. No Stock-Doves are reported as being affected, which perhaps favours the theory of the disease having been brought here by migratory Pigeons.

Food of the Barn-Owl.

Sept. 10th.—On climbing up to a Barn-Owl's roost, where they have bred in a barn of mine for several years, we found a Mole among the customary pellets of mice-fur and bones. It is seldom that Owls eat Moles, and this one had been ejected whole, and only half-digested, as if the Owl had not liked it overmuch. I have never kept any birds of prey, nocturnal or diurnal, which would eat Moles if they could get anything better. Needless to say there was no remains of game. A Norwich gardener, in an essay written a few years ago, says:—"The number of mice a pair of these Owls will destroy is almost incredible. . . . When the birds have young, their visits to their nests are frequent. I have timed them on many occasions, and found their visits averaged eight times per hour. . . ." Yet some of our wooden-headed gamekeepers in Norfolk continue to destroy this useful ally; but farmers know better than to kill them, and no wonder when they get a hundred rats out of a fifty-quarter wheat-stack, and field-mice which do more harm to stacks than rats!

Red Grouse.

An unsuccessful attempt to rear Grouse was made this summer by a gentleman at Lingwood; of eight young birds five nearly reached adolescence, but just when they had begun to use their wings they dropped off from some cause. A good aviculturist who has reared them says that if they are once allowed access to heather they will neglect all other food for it.

THE NESTING OF THE COMMON TERN AND BLACK-HEADED GULL IN COLCHESTER HARBOUR.

By Thomas Hepburn.

I was enabled during the early summer of 1909 to make some extended observations on a mixed colony of Common Terns (*Sterna fluviatilis*) and Black-headed Gulls (*Larus ridibundus*) which were nesting in Colchester Harbour. I will not define the position of the colony more closely.

Although I only located the colony last year (1909), I had previously, in the late summer of 1907, seen a large mob of Common Terns resting on the mud of one of the tidal creeks—at a spot, as it turned out, not far from their nesting site. The composition of the mob, adult birds and the young of the year together, and the large number of individuals forming it, suggested the members of a colony gathered together previous to their autumn migration. During the summer of 1908 I made notes of several individuals of the same species seen in various localities of the estuaries of the Colne and Blackwater. But I could obtain no information locally, either from fishermen or shepherds, of any spot where they nested. This, however, I found myself last spring by a careful and systematic exploration of the creeks and saltings of the neighbourhood in which I saw the big mob in 1907. Even the gentleman to whose farm the land on which the birds nested was attached was not aware of their presence. Through his courtesy I was enabled to pay many visits to the colony, and carry out some detailed observations amongst the nesting birds during the summer of 1909.

Their nesting site was situated entirely outside the marsh walls. It was therefore subject to being submerged by the tide, if ever the level attained was high enough. I have been told that tides occasionally do cover the whole area, but during the months of my observations—May, June, and July—no tide came anywhere near doing so. There is a prevalent opinion locally that the tides of the spring season are not on the average so high as at other seasons of the year. And they are generally spoken of by the country folk as "bird tides"—the name assuming by implication that the tides are providentially arranged so as to suit the exigencies of the birds sitting on the salt marshes. As will be seen a little later from my notes, the birds sometimes presume too much upon the clemency of the tides towards their nesting operations.

The salt marsh in question might be described as an isosceles triangle in shape, with its base abutting on the upland, and its apex dividing two tidal creeks. The highest ground was on the central and most seaward portion of the triangle. There was a gradual sloping away at each side and at the base near the upland. These lower parts were several times submerged by the spring tides during the three months. But the central tableland—as it might be called—was not. The whole variation beween the highest and lowest levels of the marsh would not exceed two feet. The lower margins were deeply intersected by gutters, wide at their mouth, but diminishing as they wound their way inland, until they vanished altogether before the central part of the marsh was reached. These tortuous creeks cut the margin of the triangle into hummocks, in a way characteristic of many salt-marshes, which were covered all over their tops by a thick growth of sea-purslane (*Atriplex*). The higher ground was level and firm; but its surface was broken by shallow basins and narrow channels, with flat bottoms and steep edges, at the most nine inches deep, and three-parts filled with water. This water was of course salt water, and there were plenty of Crabs and Shrimps in some of them, proving that the tide sometimes filled them. The central tableland was thus divided into irregularly shaped areas of flat ground overgrown with fine grass and a great profusion of thrift (*Armeria maritima*) and sea-lavender (*Statice*). The sea-lavender seemed to me to grow most on a slightly lower level of ground than the thrift. It was chiefly on the thrift-bearing ground that the Terns were nesting; that is, on the highest ground of the whole area, and, therefore, the ground least likely to be touched by the tide.

I found the Gulls first of all nesting on the low margins of the triangle, their nests being built amongst the long growth of sea-purslane. But at the very beginning of their efforts at nidification they met with disaster, the tide coming high enough to cover the nests and wash out the eggs. I found these nests on May 11th, one nest already having a full clutch of three eggs, another two eggs; and perhaps a dozen more ready for eggs scattered over the purslane-covered hummocks. On this occasion I saw about half a dozen Terns amongst the Gulls, but could not find any of their nests. Between that date and May 19th a tide had covered this low ground, leaving only a few traces of the more substantially made Gulls' nests, and all the Gulls were scattered. But the Terns were then much more in evidence—to the number of quite a hundred birds; and a careful search all over the higher level of the triangle resulted in the finding of two nests, one containing two eggs, and the other one egg.

My next visit was on May 31st. The Terns had by then made good progress. Fifteen nests were found—three with single eggs, three with clutches of two, and nine with full clutches of three eggs. The Black-headed Gulls were about the marsh, but still showed no signs of nesting.

On June 7th I began a system of marking the nests by means of white wooden pegs—such as are used to label seed patches in a garden—stuck into the ground about a yard off the nest, each peg with a reference number on it. I continued to do this until I stopped my observations, and thus kept a more or less complete record of each nest found. I marked fifteen Terns' nests in this way on June 7th. Between May 31st and June 7th the Gulls had begun to nest, and I marked seven of their nests on that date containing one and two eggs.

I paid weekly visits to the colony after that, with an extra visit now and again, until July 20th. During that time I marked fifty-one Common Terns' nests, and thirty-five Black-headed Gulls' nests. The bulk of the Terns' nests were all marked by June 28th, although I found two nests unmarked as late as July 12th, which might perhaps have been overlooked earlier. The last of the Gulls' nests were marked on July 11th.

The first Terns' nests were hatched on June 14th; and from then on a certain number hatched off weekly, approximately in the order in which I had numbered them, until on July 20th there were only two of their nests left unhatched, the two marked on July 12th. On July 5th several Gulls' nests were either hatched or hatching. On July 20th there were still six of them unhatched.

My visits, with intervals of a week between them, were too far apart to enable the period of incubation to be fixed accurately. The only thing that can be said is that in neither bird did the period exceed twenty-eight days. The observations pointed rather to the period of close sitting being twenty or twenty-one days after the complete clutch had been laid. In the case of the Black-headed Gulls, in half a dozen instances the period from the first egg of a clutch of three to the chipping of the eggs came within twenty-eight days.

Out of the fifty-one Terns' nests, there were thirty-six clutches of three eggs, and fifteen clutches of two eggs. Out of the thirty-five Gulls' nests, twenty-five had clutches of three eggs, and nine had clutches of two eggs; while two nests had a single egg, which eventually turned out to be addled.

The nests of both species were scattered over a considerable area of ground; those of the Terns being distributed in a series of loosely connected clumps. That is to say, you would find half a dozen Terns' nests, with ten to fifteen feet separating them; then a single nest, here and there, at quite distant intervals; then another small collection quite close together. The Gulls' nests were in and out amongst those of the Terns, sometimes quite close to them and to those of their own species; but for the most part widely separated, and the bulk of them forming a fringe round the outside of the area chiefly affected by the Terns. The whole of the nesting site occupied by the two species spread out to a length of a mile and a half, by a width of half a mile.

The greater number of the Terns' nests were made amongst the fine grass and thrift. They were open nests, that is, without any long vegetation overhanging their margins—with the exception of two which were built in some tufts of purslane with the stems overhanging the eggs, so much so as to suggest a Redshank's nest. The grass surrounding their nests always became discoloured and withered, as sitting progressed, from contact with the bird. Although there were a few nests with absolutely no lining, the eggs being laid and incubated and hatched in a slight depression of the ground and grass, the rule was a substantial pad of fine grass, plucked green, but drying afterwards, with an occasional substratum of purslane stems and thrift stems. Exceptionally, purslane leaves were added on the top. I took the material out of many of the nests after they were hatched off, and it generally made a big double handful of dry vegetable matter. This lining was accumulated gradually by the sitting bird. In the majority of cases my notes record a "slight" lining on the first finding of the nest; and a "thick" lining, or a "big pad," on the visit a week later. This was particularly noticeable after one wet week, when I found a number of nests made up with fresh material on the top of the old.

The Gulls chose spots for nesting as a rule amongst rather long vegetation, either grass or purslane, which would admit of a good-sized hollow being formed, in which the usual bulky nest of stick and straw foundation could be built, finished off by a well-formed cup, lined with finer materials. A variant on this type was often built on bare ground, the foundation of bulky material raising the cup several inches off the ground. The building of the Gulls' nests seemed to be completed before the first egg was laid.

The nests of both species were used after the eggs were hatched, either by the nestlings squatting in them, or possibly by the parent bird brooding over its young, the nests becoming spattered all round with limy excrement. The Gulls' nests had also distinct "pads" over their margins where the young birds had been going in and out. In several instances there were two of these pads to a nest, and then always opposite each other.

There were a few abnormally coloured Tern's eggs in the colony. In one clutch of two the ground colour was a pale green with olive markings. The bird to which these eggs belonged had lined its nest with fresh green purslane leaves, and the green ground colour of the eggs corresponded exactly in shade with the colour of the purslane. I looked upon this as a coincidence only, and mention it simply to show how green the eggs were. Another clutch of two eggs contained one of a normal colour, the other a deep red resembling a handsome type of Kestrel's egg.

The nestling Terns, when just hatched, had the feet and the base of the bill pale pink; the tip of the bill was black, with a very pronounced white egg-tooth. The down on the upper part of the body was a pale sandy colour with black stipplings. On the under parts it was pure white, with the exception of the chin and upper throat, which were quite black. As the chicks grew, this black turned to brown and gradually diminished in area. The down of the nestling Gulls was a much deeper shade of colour than that of the Terns. Their bills and feet were dull flesh colour, with a tinge of purple in it—something the colour of hands "blue with cold."

Some of the nestling Terns died. I made notes of sixteen deaths. The rain was responsible for a good many of them. But more than half of the number came to their death by drowning in the shallow pools with steep edges, which I mentioned in the beginning of this article. The water in these pools generally only reached to within six inches of the top of the bank. The nestlings having got into the water were unable to get out over the steep six inches of bank. It looked quite eerie to see a dead nestling Tern moving in jerky fashion across a pool, until the mystery was explained by the discovery of a Crab tugging at it. The nestling Gulls were more fortunate. I marked a number of the nestlings of both species with the aluminium rings issued by the proprietors of 'British Birds.' Only one of the dead nestling Terns had a ring on. But the only nestling Gull found dead was a marked bird, and the ring had caused its death by becoming entangled with the materials of the nest. Some young Shelducks came to grief amongst the Gulls and Terns. Possibly their striking piebald down drew too much attention to their presence. Four of them were lying dead scattered through the colony on July 19th. Two Redshanks brought off their families successfully during the time I was carrying out my observations, with their nests in close proximity to those of some Terns.

It was not possible to carry out any close observations of the old birds at their nests without risk of keeping them off their eggs too long. The approach for a considerable distance over the bare salting was a sufficient warning to them. At a distance of nearly a mile from the actual nests individual birds would already be screaming over one's head. The Terns were generally the first to arrive, but the Gulls would not be far behind. At the distance of half a mile the sitting birds could be seen rising. By the time I had worked my way through the colony to the far end, the birds would have begun to settle again where I first came amongst them. Watching through glasses from the distant upland, with the sunshine striking on the white plumage of the birds, it was easy to see that, even with no human being to alarm them, they were a very restless community. There was a continual coming and going of non-sitting birds; and it seemed not a little quarrelling amongst those sitting on the eggs.

One could not but be struck by the profusion of the one or two species of flowering marsh-plants which grew on this salting. The thrift was just beginning to open out when I started marking the nests on June 7th. During the weeks that followed there were acres pink with it. By July 4th the flowers were past their prime. Then the sea-lavender was beginning to open; and that would last well towards the end of August, and tint just as large an area of the marsh with its purple.

HAVOC WROUGHT BY THE STARLING (*STURNUS VULGARIS*).

By J. E. H. Kelso, M.D., M.B.O.U.

Prior to Dec. 20th, 1898, I always considered the Starling not only harmless but useful to agriculture. However, on that date a farmer told me he had a suspicion they were eating his wheat. I shot a few, and found he was correct. On dissection I discovered not a grain or two, which might have accidentally been picked up with animal matter, but each Starling had a number of grains inside. A year or two before this I found Starlings would eat grain which had been scattered about to feed Pheasants, also when shed on stubble, but was not aware they would dig up and eat newly sown and sprouting wheat. In December, 1899, I began to thoroughly investigate the matter, and shot Starlings on wheat-fields, finding they always contained grain. This wheat-eating (at least to any extent) appeared to me a newly acquired habit, so I wrote an account of it to 'The Field,' and received several replies, apparently from practical farmers. I quote three:—

1st. "On only one occasion I have found hard wheat in a Starling, and that was in a very hard winter when the threshing machine stood in the rickyard (it had been threshing wheat), and there came a deep snow. After a day or two I swept a path to shoot Sparrows, and shot, amongst others, a Starling; it had several grains of wheat inside, but birds would be hard pressed for food, so it was not much to go by."—Whipcord.

2nd. Ernest D. Rider, Edgebolton, Shrewsbury, stated "that Starlings did a great amount of damage to the wheat on his farm, and that of his neighbours, the previous autumn by stocking up and eating the wheat just as the shoots were coming through the ground. Although he had always protected the Starling for the amount of good it did, on this occasion he was compelled to shoot at them for two days before they would leave the field alone. He opened many, and found wheat in them all, and the field was covered with holes where the Starlings had been pecking down to get at the grain. The only other instance of the kind he knew was about ten years before during a sharp frost in autumn."

3rd. Mr. LENO COX, Pond Farm, Hemel Hempstead, stated "he farmed between five and six hundred acres of land, and in his experience the Starling had been occasionally one of severe loss. Whenever he had wheat sown rather late the Starling had done a vast amount of damage, but the wheat that had been sown in good time they had never meddled with. The mischief, he contended, is done just as the blade is showing itself. The Starling then makes a hole down the side of the blade, and squeezes the pulp out of the seed. A few years before one of his outlying fields had been completely ruined by Starlings, and had to be ploughed and sown again in spring."

In 1905 correspondence again started in 'The Field' *re* damage done by Starlings. I should like to state here all my observations were confined to Hayling Island, Hants.

Before December, 1898, I found Starlings fed on molluscs, worms, wireworms, leather-jackets, cockchafer-grubs, ticks, beetles, spiders, and occasionally fruit, such as raspberries, figs, cherries, sometimes pears. Since 1898, every year I find Starlings shot on wheat-fields—from the beginning of November to about the middle of January, according to the season—contain much wheat, but even during this time, when shot on meadows or stubble, they contain insects and their larvæ, also molluscs.

On Hayling a few Starlings begin to eat the wheat immediately it is sown; on the second day they appear in greater numbers, and continue at frequent intervals to devour the grain till the blade is just sprouting above the ground, then they leave off. Contrary to the experience of one of the correspondents in 'The Field,' I find even when the wheat is sprouting they swallow the whole grain, not the pulp alone. In frosty or very wet weather they cease to attack the crop; in the former case because they cannot reach it, in the latter probably from two reasons—1st, their insect-food is found more easily; 2nd, the semi-liquid earth clogs their claws and impedes flight.

Stomach Contents of Starlings.

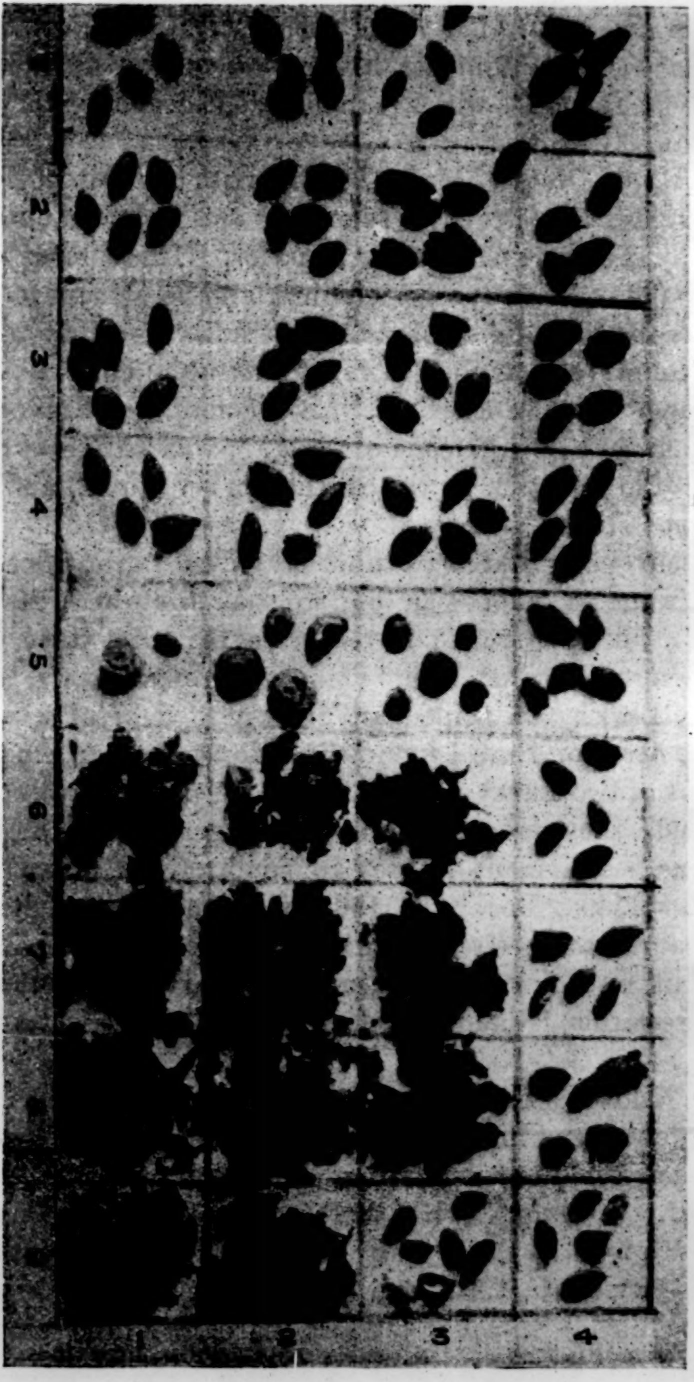
Nov. 14th, 1909, a field of wheat was sown; Nov. 16th it was visited by a flock of between two and three hundred Starlings, which busily commenced feeding. A shot fired into them accounted for seven. One of these contained 37 grains of wheat (I think this amount excessive), one shell of *Helicella caperata*, one shell of *Paludestrina ventrosa*, a triturated mass which appeared to consist almost entirely of wheat; this mass weighed 46 grains, the separate grains of wheat, 32 grains; total weight of contents in one stomach, 78 grains.

Of the whole seven Starlings, the contents were 112 separate grains of wheat; excluding the two small molluscs in the first Starling mentioned, the rest contained four shells of *Hygromia hispida*, five shells of *Helicella caperata*, one shell of *Cochlicopa lubrica*, a few small beetles and elytra, and a mass of triturated material apparently almost entirely wheat. This triturated mass, the few molluscs and beetles, weighed 112 grains, the separate wheat-grains, 95 grains; total, 207 grains. The 112 grains, or rather separate grains of wheat, consumed by the seven Starlings give an average of sixteen grains apiece, but this takes no account of the large amount in the triturated material found, which amount, I believe, represents far more wheat than the 112 separate grains.

Sown wheat lies at an average depth of one and a half to two inches, but the Starling finds no difficulty in reaching it so long as there is no frost.

Dec. 29th, a single Starling, shot among Sparrows on a barley-stubble, contained fourteen barley- and three wheat-grains, a shell of *Helicella caperata*, four leather-jackets, and three red ants; also five seeds of a weed, either dock or plantain. This wheat-eating on the part of the Starling may be accounted for by its vastly increased numbers of late years. On Hayling since 1898 the Starling has increased enormously. Strange to relate, these birds rarely attack oats or barley. However, taking the whole year round, the Starling does more good than harm, I believe; but will this continue if he increases at the rate he is doing at present?

When studying the food of birds, one must take into consideration that the trituration of animal matter will be a



Newly-sown wheat, molluscs, and triturated material contained in the stomachs of seven Starlings.

speedier operation than is the case with cereals, and that as digestion and absorption of the former, in the majority of cases, takes place so much quicker in comparison, we must expect to find insect remains, which can be identified only very shortly after being swallowed.

In 'Nature Notes,' May, 1905, a writer, under the heading "Starlings in Australia," refers to the destruction of fruit caused by the Starling in the Antipodes. These birds were the descendants of British imported ones, and he goes on to say that he hopes the Starling's character will not suffer in consequence in this country. I replied in the following number, pointing to the damage done on Hayling. An extract from his reply (*vide* "Starlings, are they Friends or Foes?") was as follows:—"The amount of grain eaten by the Starling is very small, and it could hardly be called granivorous."

Of course the Starling cannot be called "granivorous," but I again want to emphasize the fact that this wheat-eating propensity must have begun in recent years. One correspondent, in replying to my notes in 'The Field,' incidentally remarked that Sky-Larks had ruined an eight-acre field of wheat. On only one occasion have I found them doing damage, when in the stomachs of two Larks shot near some offending Starlings wheat was found; they had not swallowed the grain, only the pulp.

In the Supplement to the 'Journal' of the Board of Agriculture, vol. xv., Dec. 9th, 1908, the food of the Starling is somewhat exhaustively gone into on page 57. It is reported to eat, in Cheshire, beetles, molluscs, larvæ of moths, pupæ, flies, wireworms, "daddy-longlegs," their larvæ, worms, bread, grass.

The following extracts refer to the few instances in which cereals were found in the stomach contents:—

August, 1893, one immature female contained a few grains of wheat. A male, Sept. 8th, 1903, two grains of undressed wheat. Oct. 30th, 1900, many oat-glumes (? from horse-droppings). Nov. 25th, 1904, two males (3, 9, 5 and 3, 9, 6)—both examples filled with equal proportions of vegetable matter and insects; the former consisted of wheat, oats, glumes, and one complete grain of the oat. November, 1904 (? sex), two grains of wheat.

The summary of the article states the result of the investigations, *viz.*: eleven contained insects of the injurious group; five, beneficial group; seven, indifferent group; five, wheat; two, oats; four, molluscs; five, grass.

Damaging young wheat crop: The two examples (Nos. 3, 9, 5, 3, 9, 6) were forwarded with the note that they were shot while in the act of damaging a young wheat-field, but no trace of the young plants was found among the stomach contents; so that it is highly probable that the birds had pulled up the plant in order to reach the maggots or fly-larvæ which they were found to contain.

On Hayling, of late years, they presumably devour wheat as a food itself, not for any larvæ or maggots contained in it.

Mr. Beeston, of Havant, very kindly identified the molluscs contained in the Starlings I shot.

The photograph I took shows the newly-sown wheat, molluscs, and triturated material contained in the seven Starlings. Before the photograph was taken of the 112 grains of wheat two were lost, and of the molluscs the one shell of *Cochlicopa lubrica*.

A LOST BRITISH BIRD.

By Frederick J. Stubbs.

During the Middle Ages England was the home of a White Heron or Egret, of which no useful description appears to have been handed down. Several of the earlier ornithologists referred vaguely to it, but an unfortunate note by Dr. Fleming in 1828 seems to have driven the bird out of the thoughts of modern students of the British avifauna. The following notes (which in no way exhaust the subject), if not sufficient to reinstate the species in natural history, may perhaps stimulate some other student to turn his labours to the same end.

The tiresome, but in this case necessary, task of reviewing the works of certain old ornithologists must be attended to first. William Turner (1500–1568), in his 'Avium Præcipuarum,' &c. (A. H. Evan's edition), after noticing the Common Heron, goes on to say that there was another, the "Alba, which was fair in colour, . . . and brings forth young well." On the same bird he remarks: "Of this [the Common Heron] I have seen some white, though they are rare, which differed from the aforesaid in colour only. Furthermore, the white has been observed in England to nest with the blue, and to bear offspring. Wherefore it is clear that they are of the same species." Subsequent writers (Merrett, Muffett,* and Tunstall) mention a White Heron, but the remarks of Francis Willughby are important, and need to be given in full. I quote from Ray's edition of the "Ornithology" (1678, p. 279):—

"The Great White Heron, Ardea alba major. This differs from the Common Heron, 1 in magnitude, as being lesser than that. 2 in the length of the tail. 3 in that it wants a crest. A certain Englishman (saith Aldrovand) affirmed that he had seen white Herons, though rarely, which neither in bigness of body nor shape differed from the common Heron, but only in colour. I suspect this Relator, whoever he was, was mistaken, accounting the bird in this article described by us as not to differ from the common Heronshaw but only in colour. For Mr. Johnson,* who hath seen the bird in England, puts it down for a distinct kind in his Method of Birds communicated to us." This correspondent of Aldrovand was, as we now know, William Turner. I desire to lay stress on the point that there was some doubt whether or not this White Heron had a crest, but more will be said later on this. That Willughby himself had no knowledge of the bird is a matter of little importance, for he can only speak of the Crane from hearsay; yet the abundance of this species in England in former times is beyond question. And Tunstall classed together in an appendix of 'Aves raro in Brittaniam adventientes' Crane, Egrette, Great White Heron, Spoonbill, Crossbill, and even Brambling. It is also necessary to quote the remarks of Pennant ('British Zoology,' 2nd ed. vol. ii.). Under the heading of Great White Heron (p. 345), after referring to Willughby and Turner, he speaks of the "Egrittes" of Leland as a smaller but crested bird; and at p. 495 he prints the bill of fare for the great feast at Cawood, in Yorkshire, on the enthronization of Archbishop Neville in 1374 (*cf.* John Leland's 'Britt. Collecteanea,' vol. vi. pp. 2 *et seq.*). At this feast vast quantities of game and other animals and birds were consumed. There is no need to go into all the details of the hundreds of Cranes, Bitterns, Herons, &c., that appeared at this orgy, and only one item may be mentioned. It is "Egrittes, 1000." Leland's figures, large as they are, were accepted by Pennant, who was certainly not ignorant of the minor details of English history.

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* 'Health's Improvement' (1655). The following passage (p. 93) cannot be known to a critic of Merrett's ('British Birds,' ii. p. 161):—"All the Heronshaws (namely, the Black, white, criel-heronshaw, and the mire dromble) though feeding somewhat better than the Byttor or Stork," &c.; and Muffett mentions the Spoonbill as "Shovelard."

We now come to the time of Fleming's unlucky comment. In 1828, in a 'History of British Animals,' he has the following passage (p. 96):—"*Ardea garzetta*, Temm. This is supposed to be the species, a thousand individuals of which were served up under the name Egrittes at the feast of Neville in the reign of Edward IV. It is possible, however, that the Lapwing may have been referred to, as the commonest bird with a crest. On the supposition that this Heron was the bird alluded to, it will be difficult to account for the silence of Willughby and Ray in regard to this species being a native of Britain." As we have seen, Willughby believed in a British species of White Heron, but was not able to prove that it had, or had not, a crest—that it was *Ardea alba* or *A. garzetta*. But the mischief was done. Selby agreed with Fleming, and, later, Yarrell agreed with both these writers, like them without making any independent enquiry, and in his well-known work he dismisses the subject as follows :—

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* Johnson was a Yorkshireman, rather an interesting fact in connection with Leland's account of the Cawood Feast.

"The oft-quoted passage from Pennant . . . is probably founded on error. As suggested by Fleming, and followed by Selby, the birds were no doubt Lapwings." Yarrell's opinion, although it was founded on Fleming's hasty and dogmatic passage, is shared by every ornithologist of the present day; a footnote on p. 505 of Newton's 'Dictionary of Birds' summed up one other aspect of the matter, but here the errors of a few are used to condemn the writings of a correct many.

From works other than those of professed naturalists I have succeeded in gathering a great deal of evidence showing that about the time of Neville's feast the Egret was both common and well known in England. Only a portion of the evidence can be given here. In one of the MSS. of the Harleian Library (Douce MS. 55 (date 1430), *cf.* Austin, Eng. Text Soc. p. 115) will be found directions for killing, cooking, and carving the Egret: "Egrett Rost. Breke an egrettes nekke, or cut the rofe of hys mouthe, as of a crane . . . folde his legs as a bitore [Bittern] . . . & rost hym." A Crane was killed by cutting the roof of the mouth and "lete him blede to deth." Another Harleian MS. (4016, date 1450) refers to this method of slaughter, which was used on Curlews, Swans, Herons, and Bitterns: "Kutte in the rove of the mouthe toward the brayne enlonge." John Russell, in his 'Boke of Nurture' (written 1460–70, printed 1867, E. E. T. Soc.), mentions the Egret several times. He tells how in "Wodcok, Bitoure, Egret, Snyte, Curlew, and Heyronsew" the beaks must be broken by the carver, thus suggesting that all were long and breakable. But he does not mention this operation in speaking immediately afterwards of the "Feysaunt, Partriche, Plouer, and Lapewynk." And, again (line 539), the Egret is classed for another reason with Heyronsewe and Crane, while a few lines below he speaks of "Bustard, Betowre, Shovelar [Spoonbill], Wodcok, and Lapewynk." Newton cannot have been aware of this and several other works when he stated that the Egret of the Middle Ages was nothing but the Lapwing.

In 1508, and again in 1513,* Wynkyn de Worde, the famous printer, published an anonymous 'Boke on Kervynge.' Here again occurs "Plouer or Lapwynge," followed almost immediately by "Bytture, Egryt, and Heronsewe." In those days they must have been punctilious in their terminology (as people are even now in some forms of sport), and some of the appropriate verbs are very curious. For instance, one had not to use the word "carve" at all. The actual term depended on the bird: "Dysplaye a Crane"; "Dysmembre a Heron"; "Vnioint a Bytture"; "Breke an Egret"; "Mynce a Plouer," &c.

It is worth noting, in de Worde's volume, that an Egret has to be carved as a Heron, while a Plover must be carved as a hen. In the "dysplaying" of a Crane the novice is warned to "beware of the trompe in her breast," thus showing an acquaintance with the remarkable coiled trachea present in no other British bird. Indeed, all through these old books one detects the experience and knowledge of the writers, and this knowledge appears also in other books besides those relating to sport or the table. Cotgrave, in his 'Dictionary' (1611), translates the French "Aigrette" to "a fowl like a Heron, but white; a criell or dwarf Heron." And one Peter Lewin, in a curious 'Rhyming Dictionary,' first published in 1570, translates Egret to the Latin *Asterias* [= Heron or Egret]; and there are many other references which, although carrying individually but little weight, afford strong proof that the Egret was well known as a sort of Heron to the writers of the fifteenth to the seventeenth centuries.

One other work mentioning the Egret must not be passed unnoticed, for it is of extraordinary interest to ornithologists, although to-day practically unknown; I have never seen it referred to in any book on birds. It is a MS. containing elaborate directions for the proper government of a nobleman's house; it is dated 1605, and was published in full by Sir Joseph Banks in 'Archeologia,' vol. xiii. pp. 315 *et seq.* This paper includes unusually copious lists of game-birds and wildfowl in their proper seasons. The Bustard is mentioned, and also the Storck, Crayne, Shoveler, Ruffe, and Bittor. The Lapwing appears as "Lapwine."* The bird now particularly under notice is here mentioned under several different spellings—Egrett, Egrete, and Egreate. It was in season in April and May, so there is no wonder it became extinct. The reader will easily understand that the author of this old MS. did not mean "Lapwing" when he wrote "Egret," for both the birds were known to him, and both are specified. I have not yet found the locality for this nobleman's house, but, judging from the list of birds available for food, it was on the coast, and towards the north—very possibly Northumberland, Durham, or Yorkshire. Some of the old names are rather curious—Pevette [Black-headed Gull], Jedcocke [Jack-Snipe], Cudberduce [Eider], Cullver [Pigeon], Elke [Wild Swan], Crouces [Grouse], and Curlewiacke [Whimbrel]. This MS., like so many others of the period, mentions the "Brewe." I have been unable to find out what bird this is. Dr. Furnivall ('Meals and Manners,' E.E.T.S. p. 27) suggested the Whimbrel, but there are two objections—the bird is in season at the wrong time, and in the Banks MS. the Whimbrel is actually mentioned as "Curlew Jack," still a frequent name in the North of England. Perhaps I may make the suggestion Glossy Ibis, or more probably one of the Godwits. I am also in the dark as to the meaning of the name "Bayninges." Were they water birds addicted to plunging? Here occur the common items "Grete Byrdes," and also the less usual "Smale Byrdes." The former could not have been very "great," for in the 'Percy Household' Book they are priced at "iiij a pennye," Larks being "xij a pennye," and Herons and Bitterns a shilling a piece "so they be good." Strange to say, in the 'Percy Book,' the price of Sholardis [Spoonbills] was only half that of Herons.

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* There was, I find, another edition of this rare work printed by E. Allde (1590?). The word is here spelled "Egript."

It has been suggested to me that these old books may have been translations of earlier French, Italian, or German works on manners or cookery, and so must not be accepted as indices to the bird-life of England. I might as well add that I have been carefully through all their lists of birds, mammals, and fishes, and find no species that are common on the Continent and unknown here, with the exception of the Egret—and this I claim to have been a common English bird at the time.* It is perfectly clear that this special literature was based on a British fauna, the constituents of which were familiar to the various writers. Fortunately we have even stronger evidence than that provided by the cookery books, dictionaries, and works on sport. The account of the Egrets at Neville's famous feast is still under a cloud, and it need not be used again.

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* Professor Skeat has shown that the second syllable in the modern word has nothing to do with *wing*; the whole name is from the Anglo-Saxon "Hleapewince"—one who staggers or turns in flight.

But at the Coronation Feast of Henry IV. at Westminster, Oct. 13th, 1399 (Harl. MS. 279 and 4016) we read that "Cranys, Byttures, and Egretez" were served during the second and third courses. Thirty-six years later, at a feast on the occasion of the induction of Stafford to the Bishopric of Bath and Wells (Sept. 16th, 1425), "Egrets" were served, as were "Heyroun, Crane, Curlewe, Pety Curlewe, Plovers, Snytys, Gullys, Tele, Fesauntes," &c., and "*Hyrchouns*" [Hedgehogs].

Lapwings, by that name (they were spoken of at times as "Lapewynk" or "Plouer"), are not of frequent occurrence in these old bills of fare. They may have been recorded as Plover, but the present writer has elsewhere ('Naturalist,' 1907, pp. 310–11) given his reasons for believing that the Lapwing has not always been a common bird in England, but has increased with man. If it was, as Newton and others suggested, that "Egret" was the old English name for Lapwing, how is it that so few *thoroughly reliable* proofs of the mistake have reached us to-day? The modern error is based on the obvious mistakes of one or two theological writers of the Middle Ages; for all we know to the contrary, the Lapwing was so rare to their minds that they were unacquainted with its edible qualities, and so made the "*vpupa*"† and "*Egettides*" mistakes referred to by Newton. There is not the slightest room for doubt, after comparing the directions for killing, cooking, and carving the various birds, that the "Egret," whatever it was, had much the same shape, size, and structure as the Bittern and Heron, while the Lapwing was much like a Plover or Partridge. The comparative numbers served up provide us with no clue, for at a feast to King Richard in 1387, on Sept. 23rd, although fifty Swans, two hundred Geese, one hundred and twenty Curlews, one hundred and forty-four "Brewes," twelve Cranes, and "Wilde fowle ynogh" were provided, they could only get four "Fesauntes" and five "Herons and Bitores." So far as the wild birds are concerned, these figures would be different at the present day. From the fact that the cook had to kill the Egrets, Cranes, Herons, and Bitterns, and in some cases save the blood for making a sauce, it would appear that these birds were caught alive and kept till required. This view is supported by the Act quoted below.

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* John Russell speaks of the Beaver, and how its tail had to be served with green peas, but this interesting animal can be left for some future discussion, and the same remark can apply to the Stork.

† Lewin (*t. c.*) translates "Lapwing" "*vpupa*," but he made no mistake about "Egret."

The netting and snaring of Herons and other birds was, even in 1503, a menace to the stock, and in that year a law was made (19 Hen. VII. cc. 10, 11) forbidding the netting or trapping or the killing of Herons except by hawk or longbow, under a penalty of 6*s.* 8*d.* What effect this Act had I cannot tell, but shortly afterwards the native birds *and their eggs* had been systematically harried "in such wyse that the brode of wyldefoulle is almost therby wasted and consumed and dayly is lyke more and more to wast and consume yf remedy be not therfore pvyded," &c. (25 Hen. VIII. c. 11). This wise law protected the eggs of Crane, Bustard, Bittern, Heron, Mallard, and other fowl; the Egret is not mentioned, but it is by no means the only omission. This Act contains the admission that formerly "the King's Household and the houses of Noblemen and *Prelates* [!] have been furnished at reasonable prices, but now the birds are almost extinct."

Unfortunately, an agitation ostensibly in favour of the wild-fowlers led to a new Act (3 Ed. VI. c. 7) repealing or modifying previous laws, and from this year we must date the beginning of the end for many a British bird. The Egret, as we are told by those who have studied it in its southern home, is peculiarly unsuspicious of mankind, and there is no doubt it would be one of the very first to disappear. I do not hesitate in thinking that the bird was *Ardea garzetta*, and not *A. alba*. We do not know enough to assume that it was an insular species with no living representatives. A very few chance occurrences already give us the privilege of adding the bird to our list, but I hope the foregoing remarks will help to place it on a more dignified footing as a British bird, "once very common, but now, owing to persecution, quite extinct in England." Perhaps further study may settle the actual species, for to quote Chaucer—and on birds too: "Out of olde bokes in good eith cometh al this newe science that men lere."

NOTES AND QUERIES.

MAMMALIA.

Notes on the Mammals of Islay.—Mr. Harold Russell is quite right in that the late Mr. T. E. Buckley and I were "incorrect" in stating that "the Lesser Shrew is the species which alone inhabits the Isles." We now realize, what Mr. Russell tells us, that *Sorex araneus* has been identified by Mr. Oldfield Thomas as occurring in Islay. We ought to have said "up to the date of our writing (*i. e.* May, 1892), *Sorex minutus*, which alone *had been found* inhabiting the Isles," &c. This, I think, would have more correctly described what was then known of the distribution of this land mammal. We find that the late Mr. Edward R. Alston, when he wrote his "Mammalia" for the 'Fauna of Scotland,' prepared for the Glasgow Nat. Hist. Soc.—and which we very fully quote in our volume on the 'Outer Hebrides' (pp. 1–7)—he at that time *queried* the occurrence of either *S. tetragonurus* or *S. minutus* in the Isles of the Inner Group of the Hebrides, but recorded the presence of *S. minutus* both on the Mainland and in the Outer Hebrides—and, indeed, founded two arguments on the Natural Dispersal of Land Mammals in Great Britain—and, as regards Ireland and Scotland especially, upon that and similar phenomena. As the Common Shrew has only *now* been identified and recorded from Islay, there still seems to be some difficulty in accounting for its *natural* occurrence there, if we accept Alston's views of Dispersal.

As I am writing just now, I may mention also that a white Otter (*ante*, p. 114) was preserved by the late Mr. Henry Evans, of Jura, where I saw it in the hall of his Shooting Lodge at Small Isles, Jura. It had been captured in Jura. — J. A. HARVIE-BROWN (Dunipace, Larbert, Stirlingshire, N.B.).

P.S.—I would like to add that I hope *all* that was written so long ago as 1888 and 1892 will not be considered as applicable to the state of a changing fauna and the changed conditions of the present time, knowing as we do how *rapid* are many changes in dispersal and extension of species from numerous causes which may not have existed a short twenty-five years ago.

Variety of the Mole. — On March 25th last I trapped in this garden a male Mole weighing a little over 3¾ oz., and in very good condition. It had a patch on the throat, a small patch on the forehead, and a large one on the lower belly of the orange-chestnut sometimes seen much more largely developed on the under parts.

The colour in this specimen was dull and dusky, and not the brilliant shade we see in some examples, that on the throat being the lightest and brightest. There was an obscure shade, or cast, of brown all over the upper parts, but affecting only the outer surface of the fur. I have never before met with the orange-bellied variety of the Mole in this district. The buff or apricot variety has occurred several times in Oxon, and a Mole-catcher told me he once caught one with a white mark as big as a horse-bean on its head. — O. V. Aplin (Bloxham, Oxon).

Lesser Shrew in Bedfordshire.—The first record of the Lesser Shrew (*Sorex minutus*) being obtained in the county of Bedfordshire applies to a specimen taken at Blunham on March 7th last. A tenant of mine at the Old Mill House caught one in his pantry in a mouse-trap baited with a raisin. Fortunately the specimen was sent on to me with a request for the name of the "wee beastie." — J. Steele Elliott (Dowles Manor, Shropshire).

AVES.

Late Departure of Chiffchaff. — On Jan. 13th last I saw and watched for some minutes a Chiffchaff (*Phylloscopus rufus*) at Buxted, Sussex; it was hopping about the sides of a stable-drain, and taking the insects on the wing as they arose. I supposed this bird to have been a late departure rather than an early arrival.—Robert Morris (Uckfield, Sussex).

Chiffchaff in Hants.—I here heard and watched for some time a Chiffchaff on March 15th. It was busy "chiffing" about some tall hazel and young ash.—T. A. Cotton (The Mount, Bishopstoke, Hants).

Nesting of the Wren (Troglodytes parvulus). — Last year some instances of—to me—an unusual choice of a nesting-site for this bird came under my observation in this district. I refer to nests built in holes in trees and walls; by holes I do not mean open places in walls, &c., caused by the removal of a half brick or stone—Wrens often choose such a position—but small cavities such as might be occupied by hole-breeding birds, and where in the case of the Wren the domed nest is necessarily dispensed with. One nest was formed in a small hole in an ash-tree, the cavity was lined with moss throughout, the entrance to the hole being built up from the inside with moss closing up the aperture in the bark with the exception of the usual small hole for access; this was the only portion of the nest visible, and there was no attempt at a dome or hood to the entrance hole. Another nest was constructed in the top of a hollow tree-stump serving as a gate-post. The hollow was more or less open at the top, so a dome was partly formed in this case. The entrance to the cavity was a narrow vertical slit at the side; this was partly filled up with moss from the inside as in the other instance. The nest contained half-fledged young. In both these cases the contents of the nest could not be reached by the hand, owing to the smallness of the aperture and depth of the nest. Very little of the nesting materials was in view, the nest being practically built inside the hole. More curious still was a nest I saw in Denbighshire in June, 1908. It was built in a hole in a bare slate-built garden-wall overhung by thick laurel-trees, and consequently in a very dark position. The front of the nest, which was not domed owing to the confined space, was set back six or seven inches from the face of the wall so that no part of the nest was showing outside; the fact of the old birds carrying food to the young betrayed the nest. Here again the hole in the wall—a horizontal slit—was too small to insert the hand. I may add that last year a Wren built in a hedge in my garden. The nest was completed with the exception of the lining on March 20th, and then apparently deserted; on June 7th, when I chanced to look at the nest, the bird flew out, and it contained a full clutch of fresh eggs. Mr. J. Steele Elliott records a somewhat similar case in 'The Zoologist' for 1905 (p. 141). As regards the habit of building supernumerary nests, I do not believe that it is so universal as is generally supposed, though it is undoubtedly of frequent occurrence. It may be that the habit can be accounted for as being more an outlet for superabundant energy—as is the case with some of the Weaver-birds—than as serving any utilitarian purpose.—S. G. CUMMINGS (Upton, Chester).

Swan Marks.—It may be useful to call attention to "S'enssieult les privilèges, ordonnances et statuts que les seigneurs ont sur la rivière de Scarpe, pour visiter et marquer les cignes des marques desdits seigneurs." This paper, dated Aug. 18th, 1547, is illustrated with ten figures of Swans, under each of which the mark on the bill is described in full. It is preserved in the Archives de Flines, is printed with other documents on pp. 318–322 of 'Mémoires de la Société Nationale des Sciences, de l'Agriculture et des Arts de Lille,' Année 1850 (1851), under the title, "Nouveaux Analectes ou Documents inédits . . . ," by M. le Glay, and is thus completely buried and lost sight of to those interested in Swan-nicks.—C. DAVIES SHERBORN.

Reeve in Gloucestershire.—On Sept. 1st, 1909, a Reeve (*Machetes pugnax*) was shot by Mr. Cook near Tetbury, about half a mile from the Wiltshire border. I have been informed, on very good authority, that two Snow Geese (*Chen hyperboreus*) were observed last January for a fortnight or more on the Holkham estate. Both birds escaped, although repeated efforts were made to shoot them. — **Collingwood Ingram** (The Close, Tetbury, Glos.).

NOTICES OF NEW BOOKS.

Life-history and Habits of the Salmon, Sea-trout, Trout, and other Freshwater Fish. By P. D. Malloch. Adam & Charles Black.

This beautifully illustrated book is one of the best contributions to the life and habits of the Salmon that has yet appeared, and though other fish are discussed it is the Salmon that holds the pride of place. As Manager of the Tay Salmon Fisheries Company, Ltd., Mr. Malloch has used his opportunities well, and has obtained much first-hand and original information by the experimental method. As remarked in the Preface: "Hitherto it was believed that Salmon smolts returned as grilse the same year as they went down to the sea, but a study of the smolt does not bear this out. Again, the writer shows that the large Spring salmon, the small Spring salmon, and also the 'Summer Run,' are on their first return from the sea, and not from the kelt grilse as many supposed. Evidence is also given that the so-called Salmon bull-trout is not a Trout, but a true Salmon which has spawned, and consequently has become altered in appearance and white in the flesh." These facts alone would be sufficient to stamp the reputation of the volume. Scale structure is fully treated and adequately illustrated, and Mr. Malloch claims that by a study of the scales the age of a fish can be arrived at. The Salmon disease, which first made its appearance in the River Eden at Carlisle, and was noticed the following year in the Tweed and the next year in the Tay, is fully described and illustrated, with all its repulsive details; "during some seasons it is worse than in others, and the colder the weather the worse it becomes."

Mr. Malloch, writing on the Sea-trout (*Salmo trutta*), says that after thirty years' careful study, and the collection of all available information, he has come to the conclusion that the Sea-trout "is the same fish as that which is called White trout, Bull-trout, Gray trout, Peel, Sewin, Brith-dail, Salmon-trout, and many other names." Of the Brown trout (*Salmo fario*) he takes an equally synthetic view: "Many naturalists maintain that there are different species of Trout in the British Islands—Loch Leven trout, Gillaroo trout, tidal trout, and many others; but from a close study of all these trout for the last forty years I have come to the conclusion that there is only one species of Trout in Great Britain, and that in the different varieties the differences are caused by the nature of the water in which they are found and by the food they eat."

This book is a real acquisition to the library of both the naturalist and the angler.

BRITISH 26 AP 10 MUSEUM

¶ KING EDWARD VII. has passed away, affectionately mourned by his loyal subjects wherever flies the British flag, and regretted as the great "Peacemaker" by other nations.

¶ As a sportsman he necessarily possessed the inclinations of a naturalist, and the great interest he always maintained in our National Museum of Natural History will not be forgotten.

¶ As Prince of Wales he became one of the Trustees of the British Museum in 1881, a position he continued to occupy till his accession to the Throne. "The History of the Collections" contained in that institution records various donations from the late King, the last of which was the skeleton of 'Persimmon,' one of his triple winners of the "Derby."

¶ Zoologists can only echo the universal grief for a great national loss.